

REMARKS

Reconsideration of this application, as amended, is respectfully requested. Claim 56 has been amended to replace all recitations of "pressure source" with "pressure controller". This amendment is supported by at least paragraph [0051] of the specification, and hence no new matter has been added. Accordingly, it is respectfully requested that the objections to the specification be removed, as paragraph [0051] provides proper antecedent basis for "pressure controller". It is noted that the first and second pressure controllers are depicted as elements 411 and 409 in figure 4 of the specification. Accordingly, it is respectfully requested that the objection to the drawings under 37 CFR 1.83(a) be removed. The reference to element 403 has been removed from page 21 of the specification by the corrections to paragraph [0051] that were included in the amendment filed May 24, 2006. Accordingly, it is respectfully requested that the objection to the drawings insofar as it concerns element 403 be removed. Claim 62 has been amended to include "software control ... configured to switch operational modes of the upstream flow limiting conductances and downstream flow limiting conductances in time-phase with one another". This amendment is supported by paragraph [0052] of the specification, and hence no new matter has been added. In addition, claim 67 has been amended to correct a minor typographical error.

1. **Claims 56-57 and 59-70 are patentable over Hamilton (U.S. Patent No. 5,993,555), hereinafter "Hamilton", in view of Sakai et al. (U.S. Patent No. 5,070,813), hereinafter "Sakai".**

Claim 56 is patentable inasmuch as the cited references fail to teach "a second gas flow pathway coupled downstream of the reaction chamber and having switchable second and fourth limiting conductances", as recited in claim 56. The Office Action admits that Hamilton does not teach "a second gas flow pathway coupled downstream of the reaction chamber and having switchable second and fourth limiting conductances" (Office Action, page 4), but seeks to combine the teachings of Sakai regarding downstream flow control with feedback to reject the claims. This conclusion is flawed. Even if the teachings of the references were combined in the manner suggested in the Office Action, the combination of references would be structurally different than the claimed apparatus. Sakai fails to teach "second and fourth limiting conductances", as Sakai teaches the use of a single "iris diaphragm mechanism 9" (Sakai, 2:62-63). In addition, the apparatus resulting from the cited combination of references is not

configurable to have "a ratio of the first flow limiting conductance to the second flow limiting conductance being nominally equal to a ratio of the third flow limiting conductance to the fourth flow limiting conductance" as recited in claim 56, because, once again, Sakai fails to teach "second and fourth limiting conductances". Hence, claim 56 is patentable over Hamilton in view of Sakai. Because claim 56 is patentable, claims 57 and 59-61 are patentable by virtue of their dependency on claim 56.

Claim 62 is patentable inasmuch as the cited references fail to teach an atomic layer deposition (ALD) system "wherein software control is configured to switch operational modes of the upstream flow limiting conductances and downstream flow limiting conductances in time-phase with one another", as recited in claim 62. Configured software control is a structurally significant recitation of the apparatus. Hence, claim 62 is patentable over Hamilton in view of Sakai. Because claim 62 is patentable, claims 63-70 are patentable by virtue of their dependency on claim 62.

2. Claim 58 is patentable over Hamilton in view of Sakai, and further in view of Cox et al. (U.S. Patent No. 6,228,773), hereinafter "Cox".

Adding the teachings of Cox does not alter the above. Cox is cited for teaching external plasma sources, but this does not address the underlying deficiencies of Hamilton in view of Sakai. Hence, claim 58 is patentable over the combination of Hamilton, Sakai, and Cox.

For at least the foregoing reasons, the claims are patentable over the references cited in the Office Action. If there are any additional fees associated with this communication, please charge Deposit Account No. 19-3140.

Respectfully submitted,
SONNENSCHEIN NATH & ROENTHAL LLP

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Tarek N. Fahmi

Tarek N. Fahmi
Reg. No. 41,402

PO Box 061080
Wacker Drive Station
Sears Tower
Chicago, IL 60606
650-798-0320